



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,138	04/20/2001	Thomas J. Drury	X-9332	9525

7590

05/01/2003

John S. Hale  
Gipple & Hale  
6665-A Old Dominion Drive  
McLean, VA 22101

EXAMINER

CHANG, VICTOR S

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 05/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-7

<b>Office Action Summary</b>	<b>Application N .</b>	<b>Applicant(s)</b>	
	09/838,138	DRURY, THOMAS J.	
	<b>Examin r</b>	<b>Art Unit</b>	
	Victor S Chang	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 April 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 7, 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \*   c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Rejections not maintained are withdrawn.

### ***Claim Objections***

3. In newly amended claim 7, line 2, please change the phrase "said polyvinyl material having" to --,said polyvinyl acetal material having--.

In newly added claim 21, line 2, change "0.1 formaldehyde PPM" to --0.1 ppm formaldehyde--.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-6, 8-17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In newly amended claim 1, line 2, and throughout, the term "openings" appears to be new matter. Applicant has not provided any express support in the Specification, nor does the Examiner find "size" is inherently equivalent to "openings".

In newly amended claim 10, line 3 and claim 13, line 2, the phrases "gaseous formed" and "with gas formed pores" are new matter. Applicant has not provided any express support in the Specification, nor does the Examiner find such limitation inherent to pore forming process.

In newly amended claim 18, line 5 and newly added claim 20, lines 4-5, the phrase "said pores forming substantially empty cavities" are new matter. Applicant has not provided any express support in the Specification, nor does the Examiner find such limitation inherent to pore forming process.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-6, 8-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In newly amended claim 1, line 2, and throughout, the term "openings" appears to be vague and indefinite, i.e., the Examiner does not find "size" is inherently equivalent to "openings". The Examiner suggests change all the "openings" to "size", so as to be consistent with newly added claims 20 and 21.

Art Unit: 1771

***Response to Amendment***

8. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bahten (US 607662) in view of Rosenblatt (US 4098728), substantially for the reasons set forth in section 14 of Paper No. 3, together with the following additional observations.

First, upon reconsideration, the reference by Cercone et al. (US 6027573) is withdrawn, because it is now determined that Cercone does not provide any additional prior art elements which are required for the present Office action.

With respect to Applicant's Response commenting that "it is exceedingly difficult to impossible for a cured or molded product of PVA not to have an outer surface with a skin of at least a minute magnitude. The present usage is directed toward a product with minimal skin rather than the thicker formed skin of prior art" (Response, page 6, third paragraph), the Examiner notes that Bahten's teaching of "each brush is rotatably mounted on a spindle through which may be pumped water to saturate the brush" (column 11, lines 47-48) clearly shows that a substantially skinless surface is inherent to the foam structure. Additionally, it is believed that the "substantially skinless surface" is either inherently disclosed by Bahten or an obvious optimization to one of ordinary skill in the art, since it is noted that the process of making the PVA foam with a pore forming agent of the instant claimed invention (Specification, page 8) is essentially the same as Bahten's disclosure (column 3, line 56 to column 4, line 33).

With respect to Applicant's argument that Bahten and Rosenblatt are not combinable art, because "some patent use starch for the pore former while others use

Art Unit: 1771

air as the pore former" (Response, pages 6-7, bridging paragraph), the Examiner notes that Bahten expressly teaches that an air injected foam can also be used to manufacture porous polymeric devices (column 4, lines 46-49), and Rosenblatt teaches processes to form a froth with uniform gas bubbles (column 5, lines 27-40). As such, Bahten and Rosenblatt are clearly combinable art.

With respect to Applicant's Response arguing that "the production of Bahten '662 requires adding of a starch to form the pores" (Response, page 8, second paragraph), the Examiner notes that Applicant does not provide any express support in Bahten '662, nor does the Examiner find any express or inherent support in the reference that starch is used to form the pores, Applicant's argument to the contrary notwithstanding.

Regarding Applicant's comment that "twelve additional complex cleaning steps are required to remove particulate and impurities from the porous polymeric devices" (Response, page 8, second paragraph), the Examiner notes that Applicant has not included product-by-process steps in any of the independent claims of the instant invention. Also, it should be pointed out that product-by-process claims are product claims and that to be limiting in a product claim, a process limitation must be evidenced as effecting the structure or chemistry of the resultant product over the prior art. Further, the burden of proof for this showing is on Applicant after the Examiner presents an otherwise *prima facie* rejection. Note MPEP 2113 for a more detailed description.

For newly added claim 20, the Examiner reiterates that it is believed that the cleaning device of Bahten in view of Rosenblatt inherently possesses a mean flow pore

Art Unit: 1771

pressure, a wet flow rate using water, etc. (see page 9 of Paper No. 3), as well as the dry flow rate inherently.

For newly added claim 21, although Bahten is silent about the residual formaldehyde, Bahten does teach that the devices are subjected to washer/extraction step to remove impurities, and the devices are substantially free from impurities (column 7, line 65 to column 8, line 4). As such, it would have been obvious to one ordinary skill in the art to remove the residual formaldehyde to less than 0.1 ppm, motivated by the desire to minimize the impurities in the cleaning devices.

For newly added claim 22, the Examiner reiterates that the cleaning device of Bahten may be shaped as a roller (see section 14 of Paper No. 3).

Finally, Applicant's Response states that the Declaration of Thomas Drury showing that the present invention has surprising results over the products currently being used, the Examiner respectfully notes that in the absence of a formal test results, the Declaration appears to be non-factual evidences, but rather opinions of the inventor himself. As such, the Examiner finds the substance of the Declaration unconvincing.

9. Claims 1, 2, 5-7 and 9-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita et al. (US 4566911) in view of Rosenblatt (US 4098728), substantially for the reasons set forth in section 13 of Paper No. 3, together with the following additional observations.

Again, upon reconsideration, the reference by Cercone et al. (US 6027573) is withdrawn, because it is now determined that Cercone does not provide any additional prior art elements which are required for the present Office action.

Art Unit: 1771

Applicant's argument that "a range of 10 to 200 microns produces an inconsistent product with various pore wall thickness" (Response, page 7, first complete paragraph) is not understood, i.e., Applicant does not provide any express support in Tomita, nor does the Examiner find any express or inherent support in the reference shows the aforementioned inconsistency.

Regarding Applicant's Response arguing the problems of Tomita's porous material, such as "the pore former acts as a support for the foam, the foam is weakened when pore former is washed out", "many of the pore forming grains can remain trapped in the material", and "both sponge and starch combine to make a surface skin" (pages 7-8, bridging paragraph), etc., the Examiner notes that Applicant does not provide any express support in Tomita, nor does the Examiner find any express or inherent support in the reference shows the aforementioned problems. Further, the Examiner respectfully notes that the process of making the PVA foam of the instant claimed invention (Specification, page 8) is essentially the same as Tomita's disclosure (column 2, line 66 to column 3, line 14). As such, it is believed that eliminating or minimizing the aforementioned problems are either inherently disclosed by Tomita, or an obvious optimization to one of ordinary skill in the art, motivated by the desire to obtain a product with improved cleaning performance.

For newly added claim 20, the Examiner reiterates that it is believed that the cleaning device of Tomita in view of Rosenblatt inherently possesses a mean flow pore pressure, a wet flow rate using water, etc. (see page 7 of Paper No. 3), as well as the dry flow rate inherently.



Art Unit: 1771

For newly added claim 21, although Tomita is silent about the residual formaldehyde, Tomita does teach that the devices are used for cleaning metal or glass which requires very precise finishing (column 1, lines 8-15). As such, it would have been obvious to one ordinary skill in the art to minimize the residual formaldehyde, motivated by the desire to minimize the impurities in the cleaning devices.

For newly added claim 22, the Examiner reiterates that Tomita teaches a cleaning roll comprised of a polyvinyl acetal porous elastic material (see first paragraph, page 5 of Paper No. 3).

10. It is believed that the withdrawal of the Cercone reference streamlines the present Office action prior art rejections, and consequently has caused no harm to the Application. Further, in view of the new matter based rejections in newly amended or added independent claims 10, 13, 18, 20, Applicant's amendment has necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1771

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

VSC  
April 30, 2003

DANIEL ZIRKER  
PRIMARY EXAMINER  
GROUP 1300  
1700

*Daniel Zinker*